A LINGUISTIC HAPPENING IN MEMORY OF BEN SCHWARTZ

STUDIES IN ANATOLIAN, ITALIC, AND OTHER INDO-EUROPEAN LANGUAGES

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EXTRAIT

THE PREHISTORIC DEVELOPMENT OF THE ATHEMATIC
VERBAL ENDINGS IN PROTO-INDO-EUROPEAN

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1. INTRODUCTION

This article is divided into two parts. In the first part, the
Comparative Method is used to establish the probable forms of the
athematic verbal endings in Late Proto-Indo-European. In the second
part, Internal Reconstruction is used to trace the prehistoric
development of these endings in the parent language and to speculate
about their possible origin.

Even though several of the Indo-European daughter languages
possess dual endings, the dual will not be considered in this brief
investigation since it is highly probable that the development of distinct
dual forms took place subsequent to the disintegration of the
Indo-European parent languages (cf. Watkins 1969: 46). Likewise, the
augment, which is used in conjunction with the secondary endings in
Greek, Armenian, and Indo-Iranian (cf. Meillet 1964: 242; Szemerényi
1970: 277-78), will not be considered. Watkins (1969: 40) is surely
correct in seeing the augment as an extremely late, dialectal
development.

2. PRIMARY ENDINGS

The so-called "primary" endings are clearly built upon the
so-called "secondary" endings by the addition of the deictic particle
-i (cf. Kerns and Schwartz 1972: 4; Burrow 1973: 314). That the
primary endings are ancient cannot be denied, for they are found in

all of the older daughter languages, including Hittite:

	Hittite	Sanskrit	Greek	PIE
1 sg.	*e-eš-mi*	*ásmi*	εἰμί	**Hés-m-i*
2 sg.	*e-eš-ši*	*ási*	εἶ	**Hés-s-i*
3 sg.	*e-eš-zi*	*ásti*	ἔστι / ἐστί	**Hés-t-i*
1 pl.	*e-šu-wa-ni*	*smás(i)*	ἐσμέν	**(H)s-mé(n/s)*
2 pl.		*sthá*	ἐστέ	**(He)s-té*
3 pl.	*a-ša-an-zi*	*sánti*	εἰσι← **ἐντι	**(H)s-é/ón-t-i*

Since the secondary origin of the primary endings is obvious, the following discussion will concentrate mainly on the secondary endings.

3. SECONDARY ENDINGS

The so-called "secondary" endings represent the oldest forms of the athematic verbal endings. Originally, these endings appear to have been multifunctional (cf. Kerns and Schwartz 1972: 4). The so-called "injunctive" in Sanskrit represents a remnant of this multifunctional usage (cf. Burrow 1973: 299).

The secondary endings have the following forms in the daughter languages:

	Hittite	Sanskrit	Greek	PIE
1 sg.	*e-šu-un*	*ásam*	ἦα	**Hés-m*
2 sg.	*e-eš-ta*	*ás*	ἦσθα	**Hés-s*
3 sg.	*e-eš-ta*	*ás*	ἦν, Dor. ἦς	**Hés-t*
1 pl.	*e-šu-u-en*	*ásma*	ἦμεν, Dor. ἦμες	**(H)s-mé*
2 pl.	*e-eš-te-en*	*ásta*	ἦστε	**(He)s-té*
3 pl.	*e-še-ir*	*ásan*	ἦσαν, Dor. ἦν, Hom. ἦεν	**(H)s-ént* (**[H]s-ér*)

It is readily apparent that there are greater differences among the daughter languages in the forms of the secondary endings than in

the forms of the primary endings. This is due to the fact that each of the daughter languages has innovated. Therefore, it is necessary to give a detailed analysis of each form. This will serve to clear up any ambiguities before we proceed into a discussion of the prehistoric development of these endings.

4. 1ST SINGULAR

The form of the 1st sg. secondary athematic ending was $*$-m:

In Hittite, we find the ending -un. Though various attemps have been made to explain this ending, the explanation offered by Benveniste (1962: 16-18) seems to be the most convincing. Benveniste reconstructs a pre-Hitt. $*$-u-m and connects the -u- with the ending found, for example, in the Skt. 1st sg. perf. jajñáu. This -u- was extended by -m in pre-Hittite, and this regularly yielded Hitt. -u-n (cf. Bomhard 1984: 109; Sturtevant 1951: 45).

Sanskrit has the ending -am, which represents a generalization of the prevocalic form of $*$-m̥ (cf. Brugmann 1916: 595-96).

Gk. ἦα represents the regular outcome of $*$és-m̥ (← $*$He-Hes-m̥).

The remaining daughter languages contain both direct and indirect evidence that the 1st sg. ending was $*$-m. There is direct evidence, for example, in OLat. siem (← optative $*$s-yé-m [cf. Skt. s-yā́-m and Hom. εἴην ← $*$é-σ-ιη-ν]). There is indirect evidence in the primary endings found in various other daughter languages: cf. Lith. esmì, Goth. im, OCS. jesmь, etc.

5. 2ND SINGULAR

The form of the 2nd sg. secondary athematic ending seems to have been $*$-s:

Sturtevant (1951: 141) believed that the Hitt. ending -ta was derived from the 3rd sg. We will have more to say about this later (§ 12).

Skt. ás is from $*$és-s (← $*$He-Hes-s).

The Gk. ending -(σ)θα is a substitute for the regular ending and is borrowed from perfect forms such as οἶσ-θα (cf. Buck 1955: 245). Greek also has forms in -ς such as εἴης (← optative *s-yé-s [cf. Skt. s-yā́-s and OLat. siēs]). Aeolian has the primary form ἔσσι.

Confirmation from the other daughter languages that the 2nd sg. ending was *-s is found in forms such as OLat. siēs cited above, OPruss. -s in, for example, weddeis "lead", and Goth. -s in, for example, nimais "... (that you) should take".

6. 3RD SINGULAR

The form of the 3rd sg. secondary athematic ending was *-t:
Hitt. e-eš-ta may be interpreted phonemically as /est/ (cf. Sturtevant 1951: 141; Kronasser 1956: 169-70).

In Skt. ás and Dor. ἧς, the final -t has been lost (cf. Buck 1955: 245). Att. ἦν was originally the form of the 3rd pl.

The secondary ending is preserved in, for example, OLat. sied (← *s-yé-t [cf. Skt. s-yā́-t and Hom. εἴη]).

7. 1ST PLURAL

The form of the 1st pl. secondary athematic ending was probably *-me:
Hittite regularly has -weni as the primary ending and -wen as the secondary ending (with corresponding ablaut variants). According to Sturtevant (1951: 140), the Hittite ending represents the original form, which is to be reconstructed as *-we. It is this ending that was later assigned to the 1st dual in the non-Anatolian daughter languages. The variant endings -meni and -men, which correspond to the Sanskrit and Greek forms, are found only after -u- in Hittite. Later on (§ 13), we will have more to say about the relationship between these two sets of endings.

Skt. ásma is from *és-me (← *He-Hs-me) and requires no further comment.

The Greek endings are -μεν and -μες. The former corresponds to the Hitt. secondary ending -men and the latter to the Skt. primary ending -mas. According to Buck (1955: 245-46), -μεν was originally the secondary ending and -μες the primary ending. Each Greek dialect chose one or the other form to the exclusion of the remaining form.

There is a great deal of variation in the forms of the primary and secondary 1st pl. endings in the other daughter languages. However, all point to an original basic *-me (cf. Meillet 1964: 229-30 for details).

8. 2ND PLURAL

The form of the 2nd pl. secondary athematic ending was *-te:
Though Hittite has -ten, Sanskrit and Greek point to original *-te, without nasal extension. The other daughter languages agree: Lith. primary ĕs-te, secondary bùvo-te, OCS. primary jes-te, etc.

9. 3RD PLURAL

The form of the 3rd pl. secondary athematic ending was *-en-t:
All of the daughter languages point to a primary athematic ending *-en-t-i (ablaut variant *-on-t-i): Skt. sánti, Dor. ἐντὶ (for *ἐντι), Umbr. sent, Goth. sind, etc. Lat. sunt and OCS. sǫtъ are from *s-on-t-i. The secondary endings are preserved in Skt. ásan (← *é-s-en-t, earlier *He-Hs-en-t) and Hom. ἦεν. In both the Sanskrit and Homeric forms, the final -t has been lost as in the 3rd sg. OLat. sient is from optative *s-iy-en-t (cf. Hom. εἶεν).

In Hittite, the primary endings are -anzi and -enzi. The most common form by far is -anzi, though -enzi appears in a few verbs such as i-e-en-zi beside i-ya-an-zi "they make". These forms agree with the primary endings attested in the other daughter languages except that earlier -ti → -zi in Hittite (but not in the other Anatolian daughter languages: cf. Pal. -anti in, for example, a-ta-a-an-ti "they eat", Luw. -anti in, for example, wa-aš-ša-an-ti "they put on clothing, get dressed", and Lyc. -(n)ti in, for example, tãti "they put"). The Hittite secondary ending is, however, -er, and this clearly

does not agree with any of the above forms. Sturtevant (1951: 141 and 144) regarded this ending as a borrowing from the *ḫi*-conjugation. Comparable forms are found in Skt. *syúr*, Av. *hyā̆rə*, and the Lat. 3rd pl. perfect endings *-ēre* and *ērunt* (cf. Buck 1955: 296-97). We will have more to say about this later (§ 11).

10. SUMMARY

To recapitulate, the athematic secondary endings had the following forms in Late Proto-Indo-European:

	Singular	Plural
1	**Hés-m*	**(H)s-mé*
2	**Hés-s*	**(He)s-té*
3	**Hés-t*	**(H)s-én-t*
		(**[H]s-ér*)

11. REMARKS ON THE 3RD PLURAL

It will be noted that the form of the 3rd person plural secondary ending is anomalous. The earliest forms of the 1st and 2nd person plural endings end in an accented vowel. Even when these endings are extended by *-n* as in Hittite and Greek, for instance, they still do not match the form of the 3rd person plural. This seems to indicate that the 3rd person plural ending may have had a different origin than the 1st and 2nd person plural endings.

We may question whether the **-t* extension is original. It does not seem unreasonable to assume that the **-t* is analogical after the 3rd sg. ending. If we remove the **-t* extension, the true nature of the 3rd pl. ending becomes clear. The resulting form is **-en*. When we compare this with the Hitt. 3rd pl. secondary ending *-er*, we are reminded on the heteroclitic nominal forms. Therefore, we may surmise that the 3rd pl. ending had a nominal origin. Burrow (1973: 318) hints at the same conclusion as does Szemerényi (1970: 304):

The endings of the 3rd plural, *-nt* or *-r*, respectively, appear to be both of nominal origin (20): *-nt-* is probably related to the

participial *-nt-; -r*, on the other hand, has at the most a connection – not entirely clear – with the *-r* of the medio-passive formations...

No doubt, the original patterning was *-en/*-er*. As time went on, the *-en(t)* variant mostly ousted the *-er* variant. In all of the non-Anatolian daughter languages, the *-en(t)* variant is the normal ending, while the *-er* variant is preserved only in relic forms of rather limited distribution in several of the daughter languages.

We may speculate that, in order to bring about some sort of regularity within the paradigm, the 1st and 2nd person pl. endings could be extended by *-n* in imitation of the 3rd pl. form. This would explain the origin of the *-n* extension found, for example, in Hitt. *-wen(i)*, *-men(i)*, and *-ten(i)*, in Skt. *-thana* and *-tana*, and in Gk. *-μεν*. This extension was probably always optional. The patterning was permanently disrupted when the 3rd pl. was extended by *-t*.

12. REMARKS ON THE 2ND AND 3RD SINGULAR

In Hittite, the ending *-t* is found in both the 2nd sg. and the 3rd sg. As noted above (§ 5), Sturtevant thought that the 2nd sg. in *-t* was derived from the 3rd sg. However, this may in fact have been the original form of the 2nd sg., in which case the Hittite form would be an archaism. We can envision an earlier period of development in which the 2nd sg. ending was *-t* and the 3rd sg. ending was *-s*. The implication here has to be, then, that the form of the 3rd sg. attested in the non-Anatolian daughter languages was originally the 2nd sg., while the form of the 2nd sg. was originally that of the 3rd sg. Watkins (1962: 105) hints at just such a rearrangement and discusses (1962: 90-106) the extensive evidence in the daughter languages for an original 3rd sg. ending in *-s*.

According to Watkins (1969: 119-20), endingless imperatives are survivals from the time when the bare stem could be used to indicate the 2nd sg. imperative. Watkins (1969: 49-51) also claims that the 3rd sg. indicative was originally characterized by the fundamental ending *zero*. That is to say, the 3rd sg. was the zero-person of the indicative. Were this indeed the case, as seems likely from the

evidence adduced by Watkins, it would mean that the 3rd sg. indicative was at one time identical in form to the endingless imperative. Watkins (1969: 51-52) mentions the close relationship between these forms and suggests that the 2nd sg. endingless imperative may preserve an older form of the 3rd sg. indicative:

> As will be discussed in full in Chapter IX § 107, Kuryłowicz has shown that the relations of person between the indicative (representational) and imperative (appellative) planes are such that, while the fundamental *zero*-person is the 3rd sg. in the former, it is the 2nd sg. in the latter. For this reason, there exists a close relationship between 3rd sg. indicative and 2nd sg. imperative; both as functional *zero*-persons may manifest a formal zero-mark and as such be formally identical. Given the observable tendency for the imperative to preserve forms which have undergone renewal in the indicative (Lat. *legite* vs. *legitus*), the functional equation 3rd sg. indicative = 2nd sg. imperative has the consequence that the 2nd sg. imperative may preserve an older form of the 3rd sg. indicative.

What the evidence seems to be suggesting is that, at one time in the prehistoric development of the Indo-European parent language, the 3rd sg. indicative was characterized by two distinct sets of endings: (1) *zero* (that is, bare stem) and (2) *-s. (A possible explanation for this dichotomy will be offered later [§ 14]). Gradually, the endingless 3rd sg. indicative came to be used as 2nd sg. imperative.

Finally, Watkins (1969: 32-34) claims that the full-grade is to be reconstructed for the stem in the 2nd pl. indicative. Since such an ablaut grade is unexpected here, this may indicate that the 2nd pl. indicative has been remodeled after the 2nd sg.

13. REMARKS ON THE 1ST SINGULAR, DUAL, AND PLURAL

In the historically attested daughter languages, the 1st persons singular, dual, and plural are characterized by two sets of endings. First, there are the *m*-endings. These form the 1st persons sg. and pl. primary and secondary endings found in all of the daughter

languages. Next, there are the *w/u-endings. These are found in the 1st dual in the non-Anatolian daughter languages, in several perfect forms in Sanskrit, Latin, etc., in the Luw. 1st sg. indicative ending -wi, in the Hitt. 1st pl. endings -wen(i)/-wani, and in the Hitt. 1st sg. secondary ending -u-n (see above, § 4).

Even though the original patterning of these endings has been somewhat obscured, it seems that there was a tendency to use the *w/u- endings in other than the singular. Though not absolutely provable, the original distribution may have been *-m in the singular and *-w in the non-singular. What is certain is that there was a good deal of confusion between these two sets of endings: both could be used for either the singular or non-singular.

14. CONCLUDING REMARKS

On the basis of the preceding discussion, we may reconstruct earlier forms of the athematic endings as follows:

	Singular	Plural
1.	*Hés-m	*(H)s-wé
		(*[H]s-mé)
2.	*Hés-t	*(H)s-té
3.	*Hés-s,	*(H)s-én/ér
	*Hés-ø	

The ultimate origin of the athematic endings is immediately apparent: they can be nothing else but agglutinated personal pronouns (except, of course, for the 3rd plural, which has a nominal origin [see above, § 11]): *me "I, me", *te "you", *se "he, she, it", *we "we, us". Based on the assumption that the patterning of the 3rd pl. was originally similar to that of the 1st and 2nd pl., we can speculate that the earliest form of the 3rd pl. may have been *(H)s-sé. Furthermore, there may also have been an alternate form of the 1st sg. with *w/u-endings: *Hés-w. This would explain the Anatolian forms.

It may be assumed that the contrast between (A) the singular,

with zero-grade endings and accented, full-grade stems, and (B) the plural, with accented, full-grade endings and zero-grade stems, is an ancient contrast (cf. Kerns and Schwartz 1968: 717). The accent must have been characterized by a strong element of stress, which brought about the reduction of the vowel of the agglutinated personal pronoun suffixes when placed on the stem in the singular and the reduction of the vowel of the stem when placed on the agglutinated personal pronoun suffixes in the plural:

	Singular		Plural	
1	*Hés+me	→ *Hés-m	*Hes+wé	→ *(H)s-wé
	*Hés+we	→ *Hés-w	*Hes+mé	→ *(H)s-mé
2	*Hés+te	→ *Hés-t	*Hes+té	→ *(H)s-té
3	Hés+se	→ *Hés-s	*Hes+sé	→ *(H)s-sé

Still to be accounted for is the origin of the endingless 3rd sg. We may speculate that the earliest Proto-Indo-European had two conjugational types: (A) a determinative (objective) conjugation, which was characterized by the 3rd sg. in *-s and which was used with transitive verbs, and (B) an indeterminative (subjective) conjugation, which was characterized by the 3rd sg. in *-ø and which was used with intransitive verbs. If this were indeed the case (and it must be admitted that there is no way to prove this supposition), then the patterning would have been extremely close to that proposed by Hajdu (1972: 43-44) for Proto-Uralic. Moreover, if the athematic verbal endings were originally none other than agglutinated personal pronouns, as suggested above, then the parallel with Proto-Uralic would be even closer. It is worth quoting Hajdu at length:

> It cannot be regarded as a decisive argument, although it is still worth mentioning, that the personal suffixes of verbs in the Uralic languages are, for the most part, agglutinated forms of personal pronouns (much the same as the possessive suffixes).
> It is a weighty argument in the dispute that the Uralic languages are distinguished by a particular feature inasmuch as the verbs in them have two forms of the Sg3: one without Vx (more exactly: root + zero Vx) and another with Vx.

In the Ugric, Samoyed and Mordvin languages, for instance, a subjective (indeterminative) conjugation is distinguished from an objective (determinative) conjugation...

This type of duality can be found in the other Finno-Ugric languages, where the dual form of the determinative and indeterminative conjugation is absent. The fundamental differentiation of the Sg3 forms with and without suffixes is, of course, not so characteristic of these languages. Nevertheless, it appears undoubtedly from the examples of these languages that the Sg3 form with personal suffix co-occurs with transitive verbs, and the form without a suffix with intransitive verbs. Based on the duality covering the whole language family, and the related functional features, we may firmly assert that the verb had two forms of Sg3 as early as the proto-Uralic period. The form with the personal suffix referred to the determined object of the verb at that time. The pronoun of the 3rd person which was suffixed as a Vx in such forms was originally a pronoun with the value of the Accusative.

Thus the difference between the determinative and indeterminative conjugation of the 3rd person existed in proto-Uralic. Later, in the separate lives of the language groups, this distinction of the 3rd person was transferred to the first and second persons as well. Accordingly, determinative (objective) and indeterminative (subjective) Vxs were distinguished for all three persons.

The Vxs of proto-Uralic can be reconstructed in the following manner:

Singular

1 st person	2nd person	3rd person
-m	-t	Indet. ø
		Det. -se

As regards the function of the Vx of the 3rd person which is derived from the pronoun, there is a pronounced genetic difference. Vx1 and Vx2 (i.e. their personal pronominal

preliminaries) referred to the subject of the verb. In the series of paradigms representing the subject of the verb there was no need to specially indicate the subject in the 3rd person, since the 3rd person received sufficient identification by the absence of a personal suffix in contrast to the 1st and 2nd persons marked by Vxs. And where *-se Vx presented itself for the 3rd person, it did not refer to - in contradistinction with the other Vxs - the subject of the verb, but it indicated an indirect reference to the determinate object of the verb.

Earlier (1972: 39-40), Hajdu discusses the important role that pronouns played in the development of certain suffixes:

> Pronouns might have played a decisive part in the development of certain suffixes. Thus, for example, a very characteristic set of suffixes, the various forms of possessive personal suffixes (Px), can be reduced to the personal pronouns. The Hungarian language, as well as related idioms, is able to designate the possessor also by means of Px attached to the possession:

> | | |
> |---|---|
> | *hajó* "boat, ship": | *hajó-m* "my boat" |
> | | *hajó-d* "your boat" |
> | | *hajó-ja* "his boat", etc. |

> What the given examples contain in the morphemes *-m* for PxSg1, *-d* for PxSg2, and *-ja* for PxSg3 are nothing else but the results of suffixation of the personal pronouns *me* 'I', *te* 'you', and *se* 'he' of the PU language. In the Hungarian language the vowel of the pronominal element has been eroded, the *t* of the second person has become voiced, the *s* of the third person has been eroded, and the vowel sound has merged with the root-ending vowel to form *-á/-é*, which later shortened into *-a/-e* and received at the same time, in certain root-types, the glide *-j-*, this constituting now the anterior morphophoneme of PxSg3.
>
> The systems of Pxs are realized according to an identical principle in other Uralic languages. By identical principles of realization we mean that the Pxs of all Uralic languages are derived from corresponding personal pronouns, and thus they can

be deduced from common forms of origin, and further that this Px-system contains indications, in addition to the person of the possessor, of the number of possessors (singular, plural, and in certain languages dual), and what is more, very often reference is also made to the number of possessions (the number of the possessors usually being expressed by appending a number-mark to the Px, and the number of possessions by placing pluralizing, i.e. dualizing elements before the Px, respectively).

From these phenomena we may infer that a Px-system must have existed in the PU language in which the personal pronouns were first used mainly enclitically, and were suffixed at a later stage of development: here the Pxs were represented by the singular and plural (possibly dual) forms of the personal pronouns, or by certain modified forms thereof. Accordingly, the Px-system of the Uralic period may be reconstructed as follows:

	Singular	Plural (i.e. Dual)
1.	-me	-me + Plural (Dual)
2.	-te	-te + Plural (Dual)
3.	-se	-se + Plural (Dual)

For the present, we will leave aside speculations on the further implications of the incredibly close parallelism existing between Proto-Indo-European and Proto-Uralic.

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